

## SEQUENCE LISTING

<110> CANON KABUSHIKI KAISHA, et al.

<120> Kit for immobilizing organic substance, organic substance-immobilized structure,  
and manufacturing methods therefor

<130> 10002556W001

<150> JP2004-016858

<151> 2004-01-26

<160> 181

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<212> PRT

<213> Artificial Sequence

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<223> anodisk membrane-binding peptide

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Gln Ser Ser Ile Thr Thr Arg Asn Pro Phe Met Thr  
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Phe Met Asn His His Pro Asn Ser Gln Gln Tyr His  
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Ala Ala His Phe Glu Pro Gln Thr Met Pro Met Ile  
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Asp His Gln Leu His Arg Pro Pro His Met Met Arg  
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Ser Val Ser Val Gly Met Lys Pro Ser Pro Arg Pro  
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<223> anodisk membrane-binding peptide

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Leu Glu Pro Leu Pro His Thr Pro Arg Met Tyr Ala  
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Gln Leu Tyr Glu Pro Asp Ser Gly Pro Trp Ala Pro  
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<400> 25

Trp Met Thr Lys Met Pro Thr Thr His Thr Arg Tyr  
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&lt;210&gt; 27

&lt;211&gt; 12

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; anodisk membrane-binding peptide

&lt;400&gt; 27

Gly Ser Ala His Ser Arg Asn Asp Ala Ala Pro Val  
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&lt;210&gt; 28

&lt;211&gt; 12

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; anodisk membrane-binding peptide

&lt;400&gt; 28

His Ser Pro Leu Met Gln Tyr His Met Ser Gly Thr  
1 5 10

&lt;210&gt; 29

&lt;211&gt; 12

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; anodisk membrane-binding peptide

&lt;400&gt; 29

Thr Ala His Met Thr Met Pro Ser Arg Phe Leu Pro  
1 5 10

&lt;210&gt; 30

&lt;211&gt; 10

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; anodisk membrane-binding peptide

&lt;400&gt; 30

Ala Cys Pro Pro Thr Gln Ser Arg Tyr Cys  
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&lt;210&gt; 31

&lt;211&gt; 10

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; anodisk membrane-binding peptide

&lt;400&gt; 31

Ala Cys Asn Gly Met Leu Ala Phe Gln Cys

1

5

&lt;210&gt; 32

&lt;211&gt; 10

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; anodisk membrane-binding peptide

&lt;400&gt; 32

Ala Cys Thr Pro Lys Pro Gly Lys His Cys

1

5

10

&lt;210&gt; 33

&lt;211&gt; 1680

&lt;212&gt; DNA

&lt;213&gt; Pseudomonas cichorii YN2 ; FERM BP-7375

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<211> 1683

<212> DNA

<213> *Pseudomonas cichorii* YN2 ; FERM BP-7375

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 ggacgcgtgt tgctggcgga caccctgcat cccaccaacc cgcaagaccg tcgcttcgac 240  
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&lt;210&gt; 35

&lt;211&gt; 559

&lt;212&gt; PRT

<213> *Pseudomonas cichorii* YN2 ; FERM BP-7375

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Thr Leu Gly Leu Asn Pro Val Val Gly Leu Arg Gly Lys Asp Leu Leu
20           25           30

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Ala Ser Ala Arg Met Val Leu Arg Gln Ala Ile Lys Gln Pro Val His
35           40           45

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Ser Val Lys His Val Ala His Phe Gly Leu Glu Leu Lys Asn Val Leu  
50 55 60

Leu Gly Lys Ser Gly Leu Gln Pro Thr Ser Asp Asp Arg Arg Phe Ala  
65 70 75 80

Asp Pro Ala Trp Ser Gln Asn Pro Leu Tyr Lys Arg Tyr Leu Gln Thr  
85 90 95

Tyr Leu Ala Trp Arg Lys Glu Leu His Asp Trp Ile Asp Glu Ser Asn  
100 105 110

Leu Ala Pro Lys Asp Val Ala Arg Gly His Phe Val Ile Asn Leu Met  
115 120 125

Thr Glu Ala Met Ala Pro Thr Asn Thr Ala Ala Asn Pro Ala Ala Val  
130 135 140

Lys Arg Phe Phe Glu Thr Gly Gly Lys Ser Leu Leu Asp Gly Leu Ser  
145 150 155 160

His Leu Ala Lys Asp Leu Val His Asn Gly Gly Met Pro Ser Gln Val  
165 170 175

Asn Met Gly Ala Phe Glu Val Gly Lys Ser Leu Gly Val Thr Glu Gly  
180 185 190

Ala Val Val Phe Arg Asn Asp Val Leu Glu Leu Ile Gln Tyr Lys Pro  
195 200 205

Thr Thr Glu Gln Val Tyr Glu Arg Pro Leu Leu Val Val Pro Pro Gln  
210 215 220

Ile Asn Lys Phe Tyr Val Phe Asp Leu Ser Pro Asp Lys Ser Leu Ala  
225 230 235 240

Arg Phe Cys Leu Arg Asn Asn Val Gln Thr Phe Ile Val Ser Trp Arg  
245 250 255

Asn Pro Thr Lys Glu Gln Arg Glu Trp Gly Leu Ser Thr Tyr Ile Glu  
260 265 270

Ala Leu Lys Glu Ala Val Asp Val Val Thr Ala Ile Thr Gly Ser Lys  
275 280 285

Asp Val Asn Met Leu Gly Ala Cys Ser Gly Gly Ile Thr Cys Thr Ala  
290 295 300

Leu Leu Gly His Tyr Ala Ala Ile Gly Glu Asn Lys Val Asn Ala Leu  
305 310 315 320

Thr Leu Leu Val Ser Val Leu Asp Thr Thr Leu Asp Ser Asp Val Ala  
325 330 335

Leu Phe Val Asn Glu Gln Thr Leu Glu Ala Ala Lys Arg His Ser Tyr  
340 345 350

Gln Ala Gly Val Leu Glu Gly Arg Asp Met Ala Lys Val Phe Ala Trp  
355 360 365

Met Arg Pro Asn Asp Leu Ile Trp Asn Tyr Trp Val Asn Asn Tyr Leu  
370 375 380

Leu Gly Asn Glu Pro Pro Val Phe Asp Ile Leu Phe Trp Asn Asn Asp  
385 390 395 400

Thr Thr Arg Leu Pro Ala Ala Phe His Gly Asp Leu Ile Glu Leu Phe  
405 410 415

Lys Asn Asn Pro Leu Ile Arg Pro Asn Ala Leu Glu Val Cys Gly Thr  
420 425 430

Pro Ile Asp Leu Lys Gln Val Thr Ala Asp Ile Phe Ser Leu Ala Gly  
435 440 445

Thr Asn Asp His Ile Thr Pro Trp Lys Ser Cys Tyr Lys Ser Ala Gln  
450 455 460

Leu Phe Gly Gly Asn Val Glu Phe Val Leu Ser Ser Ser Gly His Ile  
465 470 475 480

Gln Ser Ile Leu Asn Pro Pro Gly Asn Pro Lys Ser Arg Tyr Met Thr  
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<210> 36

<211> 560

<212> PRT

<213> Pseudomonas cichorii YN2 ; FERM BP-7375

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Ser Thr Leu Arg Ser Val Ala Ala His Gly Leu Arg His Pro Val His  
35 40 45

Thr Ala Arg His Ala Leu Lys Leu Gly Gly Gln Leu Gly Arg Val Leu  
50 55 60

Leu Gly Asp Thr Leu His Pro Thr Asn Pro Gln Asp Arg Arg Phe Asp  
65 70 75 80

Asp Pro Ala Trp Ser Leu Asn Pro Phe Tyr Arg Arg Ser Leu Gln Ala  
85 90 95

Tyr Leu Ser Trp Gln Lys Gln Val Lys Ser Trp Ile Asp Glu Ser Asn  
100 105 110

Met Ser Pro Asp Asp Arg Ala Arg Ala His Phe Ala Phe Ala Leu Leu  
115 120 125

Asn Asp Ala Val Ser Pro Ser Asn Ser Leu Leu Asn Pro Leu Ala Ile  
130 135 140

Lys Glu Ile Phe Asn Ser Gly Gly Asn Ser Leu Val Arg Gly Ile Gly  
145 150 155 160

His Leu Val Asp Asp Leu Leu His Asn Asp Gly Leu Pro Arg Gln Val  
165 170 175

Thr Arg His Ala Phe Glu Val Gly Lys Thr Val Ala Thr Thr Thr Gly  
180 185 190

Ala Val Val Phe Arg Asn Glu Leu Leu Glu Leu Ile Gln Tyr Lys Pro  
195 200 205

Met Ser Glu Lys Gln Tyr Ser Lys Pro Leu Leu Val Val Pro Pro Gln  
210 215 220

Ile Asn Lys Tyr Tyr Ile Phe Asp Leu Ser Pro His Asn Ser Phe Val  
225 230 235 240

Gln Phe Ala Leu Lys Asn Gly Leu Gln Thr Phe Val Ile Ser Trp Arg  
245 250 255

Asn Pro Asp Val Arg His Arg Glu Trp Gly Leu Ser Thr Tyr Val Glu  
260 265 270

Ala Val Glu Glu Ala Met Asn Val Cys Arg Ala Ile Thr Gly Ala Arg  
275 280 285

Glu Val Asn Leu Met Gly Ala Cys Ala Gly Gly Leu Thr Ile Ala Ala  
290 295 300

Leu Gln Gly His Leu Gln Ala Lys Arg Gln Leu Arg Arg Val Ser Ser  
305 310 315 320

Ala Thr Tyr Leu Val Ser Leu Leu Asp Ser Gln Leu Asp Ser Pro Ala  
325 330 335

Thr Leu Phe Ala Asp Glu Gln Thr Leu Glu Ala Ala Lys Arg Arg Ser  
340 345 350

Tyr Gln Lys Gly Val Leu Glu Gly Arg Asp Met Ala Lys Val Phe Ala  
355 360 365

Trp Met Arg Pro Asn Asp Leu Ile Trp Ser Tyr Phe Val Asn Asn Tyr  
 370 375 380

Leu Met Gly Lys Glu Pro Pro Ala Phe Asp Ile Leu Tyr Trp Asn Asn  
 385 390 395 400

Asp Asn Thr Arg Leu Pro Ala Ala Leu His Gly Asp Leu Leu Asp Phe  
 405 410 415

Phe Lys His Asn Pro Leu Ser His Pro Gly Gly Leu Glu Val Cys Gly  
 420 425 430

Thr Pro Ile Asp Leu Gln Lys Val Thr Val Asp Ser Phe Ser Val Ala  
 435 440 445

Gly Ile Asn Asp His Ile Thr Pro Trp Asp Ala Val Tyr Arg Ser Thr  
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Leu Leu Leu Gly Gly Glu Arg Arg Phe Val Leu Ala Asn Ser Gly His  
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Val Gln Ser Ile Leu Asn Pro Pro Asn Asn Pro Lys Ala Asn Tyr Leu  
 485 490 495

Glu Gly Ala Lys Leu Ser Ser Asp Pro Arg Ala Trp Tyr Tyr Asp Ala  
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Lys Pro Val Asp Gly Ser Trp Trp Thr Gln Trp Leu Gly Trp Ile Gln  
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Glu Arg Ser Gly Ala Gln Lys Glu Thr His Met Ala Leu Gly Asn Gln  
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 545 550 555 560

Lys His Thr Asp Ser Trp Trp Leu His Trp Gln Ala Trp Gln Ala Gln  
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<223> Primer for PCR multiplication

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<223> Primer for PCR multiplication

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<210> 46

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<211> 58

<212> DNA

<213> Artificial Sequence



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<211> 50

<212> DNA

<213> Artificial Sequence

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<223> Complimentary chain for ssDNA of SEQ ID:1

<400> 48

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<210> 49

<211> 58

<212> DNA

<213> Artificial Sequence

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<223> Coding chain for peptide of SEQ ID:2

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<210> 50

<211> 50

<212> DNA

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<223> Complimentary chain for ssDNA of SEQ ID:2

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<210> 51

<211> 58

<212> DNA

<213> Artificial Sequence

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<210> 52

<211> 50

<212> DNA

<213> Artificial Sequence

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<223> Complimentary chain for ssDNA of SEQ ID:3

<400> 52

CCGAACCTCC ACCATGATAC TGCTGCGAAT TCGGATGATG ATTCATAAAG 50

<210> 53

<211> 58

<212> DNA

<213> Artificial Sequence

<220>

<223> Coding chain for peptide of SEQ ID:4

<400> 53

GATCCCAGTA TACGTCGTCG GGTATTATTA CGTCGTCTGC TGGTGGAGGT TCGGAGCT 58

<210> 54

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Complimentary chain for ssDNA of SEQ ID:4

<400> 54

CCGAACCTCC ACCAGCAGAC GACGTAATAA TACCCGACGA CGTATACTGG 50

<210> 55

<211> 58

<212> DNA

<213> Artificial Sequence

<220>

<223> Coding chain for peptide of SEQ ID:5

<400> 55

GATCCCAGCC GCATATGCAT CGGAGTTCTC ATCAGGATGG GGGTGGAGGT TCGGAGCT 58

<210> 56

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Complimentary chain for ssDNA of SEQ ID:5

<400> 56

CCGAACCTCC ACCCCCATCC TGATGAGAAC TCCGATGCAT ATGCGGCTGG 50

<210> 57

<211> 58

<212> DNA  
<213> Artificial Sequence

<220>

<223> Coding chain for peptide of SEQ ID:6

<400> 57

GATCCAATAC TACTATGGGG CCGATGAGTC CTCATAGTCA GGGTGGAGGT TCGGAGCT 58

<210> 58

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Complimentary chain for ssDNA of SEQ ID:6

<400> 58

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<210> 59

<211> 58

<212> DNA

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<223> Coding chain for peptide of SEQ ID:7

<400> 59

GATCCCATCA TCATCCGGAG AATTTGGATT CTA CTTTCA GGGTGGAGGT TCGGAGCT 58

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<211> 50

<212> DNA

<213> Artificial Sequence

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<223> Complimentary chain for ssDNA of SEQ ID:7

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<210> 61

<211> 58

<212> DNA

<213> Artificial Sequence

<220>

<223> Coding chain for peptide of SEQ ID:8

<400> 61

GATCCGCTGC TCATTTTGAG CCTCAGACTA TGCCTATGAT TGGTGGAGGT TCGGAGCT 58

<210> 62

<211> 50  
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<220>  
<223> Complimentary chain for ssDNA of SEQ ID:8

<400> 62  
CCGAACCTCC ACCAATCATA GGCATAGTCT GAGGCTCAAA ATGAGCAGCG 50

<210> 63  
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<220>  
<223> Coding chain for peptide of SEQ ID:9

<400> 63  
GATCCGATCA TCAGCTTCAT CGTCCTCCGC ATATGATGAG GGGTGGAGGT TCGGAGCT 58

<210> 64  
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<223> Complimentary chain for ssDNA of SEQ ID:9

<400> 64  
CCGAACCTCC ACCCCTCATC ATATGCGGAG GACGATGAAG CTGATGATCG 50

<210> 65  
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<223> Coding chain for peptide of SEQ ID:10

<400> 65  
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<210> 66  
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<223> Complimentary chain for ssDNA of SEQ ID:10

<400> 66  
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<210> 67  
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<223> Coding chain for peptide of SEQ ID:11

<400> 67  
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<210> 68  
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<400> 68  
CCGAACCTCC ACCCTGCGCA TTATGCTGAT GATGATCCCT CTGCATCATG 50

<210> 69  
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<220>  
<223> Coding chain for peptide of SEQ ID:12

<400> 69  
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<210> 70  
<211> 50  
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<400> 70  
CCGAACCTCC ACCATCTTGC GGCGCATGAT CCACCGTATG AAGAGTAACG 50

<210> 71  
<211> 58  
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<220>  
<223> Coding chain for peptide of SEQ ID:13

<400> 71  
GATCCTCTGT TTCTGTGGGT ATGAAGCCGA GTCCTAGGCC TGGTGGAGGT TCGGAGCT 58

<210> 72  
<211> 50  
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<220>  
<223> Complimentary chain for ssDNA of SEQ ID:13

<400> 72  
CCGAACCTCC ACCAGGCCTA GGA CTGGCT TCATACCCAC AGAAACAGAG 50

<210> 73  
<211> 58  
<212> DNA  
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<220>  
<223> Coding chain for peptide of SEQ ID:14

<400> 73  
GATCCCATCT TCAGTCTATG AAGCCTCGTA CTCATGTGTT GGGTGGAGGT TCGGAGCT 58

<210> 74  
<211> 50  
<212> DNA  
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<220>  
<223> Complimentary chain for ssDNA of SEQ ID:14

<400> 74  
CCGAACCTCC ACCCAACACA TGAGTACGAG GCTTCATAGA CTGAAGATGG 50

<210> 75  
<211> 58  
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<220>  
<223> Coding chain for peptide of SEQ ID:15

<400> 75  
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<210> 76  
<211> 50  
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<220>  
<223> Complimentary chain for ssDNA of SEQ ID:15

<400> 76

CCGAACCTCC ACCACGCGCA GGCTGACGCA AAGTCTCAGC ATTAGGAATG 50

<210> 77

<211> 58

<212> DNA

<213> Artificial Sequence

<220>

<223> Coding chain for peptide of SEQ ID:16

<400> 77

GATCCGTTTCG CGTCATCAGT TCGTGGCATC CGCATGATCT TGGTGGAGGT TCGGAGCT 58

<210> 78

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Complimentary chain for ssDNA of SEQ ID:16

<400> 78

CCGAACCTCC ACCAAGATCA TCGGGATGCC ACGAACTGAT GACGCGAACG 50

<210> 79

<211> 58

<212> DNA

<213> Artificial Sequence

<220>

<223> Coding chain for peptide of SEQ ID:17

<400> 79

GATCCACGGT GCCGATTTAT AATACGGGGA TTTTGAGGAC GGGTGGAGGT TCGGAGCT 58

<210> 80

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Complimentary chain for ssDNA of SEQ ID:17

<400> 80

CCGAACCTCC ACCCGTCCTC AAAATCCCGG TATTATAAAT CGGCACCGTG 50

<210> 81

<211> 58

<212> DNA

<213> Artificial Sequence

<220>

<223> Coding chain for peptide of SEQ ID:18

<400> 81  
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<210> 82  
<211> 50  
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<220>  
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<400> 82  
CCGAACCTCC ACCCGCCGT ATAAACGTCG ACCCATGATG CATAGTATAG 50

<210> 83  
<211> 58  
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<220>  
<223> Coding chain for peptide of SEQ ID:19

<400> 83  
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<210> 84  
<211> 50  
<212> DNA  
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<220>  
<223> Complimentary chain for ssDNA of SEQ ID:19

<400> 84  
CCGAACCTCC ACCAAGAATC CCGAGACGAA TATTCACATG CATCATCGAG 50

<210> 85  
<211> 58  
<212> DNA  
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<220>  
<223> Coding chain for peptide of SEQ ID:20

<400> 85  
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<210> 86  
<211> 50  
<212> DNA  
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<220>  
<223> Complimentary chain for ssDNA of SEQ ID:20



<400> 86

CCGAACCTCC ACCCGCCCGA TACAGACTCT TCATATGATG CATCGGCGCG 50

<210> 87

<211> 58

<212> DNA

<213> Artificial Sequence

<220>

<223> Coding chain for peptide of SEQ ID:21

<400> 87

GATCCATGAT GCAGAGGGAT CATCATCAGC ATATGCGCAG GGGTGGAGGT TCGGAGCT 58

<210> 88

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Complimentary chain for ssDNA of SEQ ID:21

<400> 88

CCGAACCTCC ACCCCTGCGC ATATGCTGAT GATGATCCCT CTGCATCATG 50

<210> 89

<211> 58

<212> DNA

<213> Artificial Sequence

<220>

<223> Coding chain for peptide of SEQ ID:22

<400> 89

GATCCATGAA GACTCATCAT GGTAATAATG CCGTGTTTCT GGGTGGAGGT TCGGAGCT 58

<210> 90

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Complimentary chain for ssDNA of SEQ ID:22

<400> 90

CCGAACCTCC ACCGAGAAAC ACCGCATTAT TACCATGATG AGTCTTCATG 50

<210> 91

<211> 58

<212> DNA

<213> Artificial Sequence

<220>

<223> Coding chain for peptide of SEQ ID:23

<400> 91  
GATCCTTGGA GCCGCTTCCT CATACTCCTC GGATGTATGC GGGTGGAGGT TCGGAGCT 58

<210> 92  
<211> 50  
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<223> Complimentary chain for ssDNA of SEQ ID:23

<400> 92  
CCGAACCTCC ACCCGCATAC ATCCGAGGAG TATGAGGAAG CGGCTCCAAG 50

<210> 93  
<211> 58  
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<220>  
<223> Coding chain for peptide of SEQ ID:24

<400> 93  
GATCCCAGCT GTATGAGCCT GATTCTGGGC CGTGGGCTCC GGGTGGAGGT TCGGAGCT 58

<210> 94  
<211> 50  
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<220>  
<223> Complimentary chain for ssDNA of SEQ ID:24

<400> 94  
CCGAACCTCC ACCCGGAGCC CACGGCCCAG AATCAGGCTC ATACAGCTGG 50

<210> 95  
<211> 58  
<212> DNA  
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<220>  
<223> Coding chain for peptide of SEQ ID:25

<400> 95  
GATCCTGGAT GACTAAGATG CCTACTACGC ATACTAGGTA TGGTGGAGGT TCGGAGCT 58

<210> 96  
<211> 50  
<212> DNA  
<213> Artificial Sequence

&lt;220&gt;

&lt;223&gt; Complimentary chain for ssDNA of SEQ ID:25

&lt;400&gt; 96

CCGAACCTCC ACCATACCTA GTATGCGTAG TAGGCATCTT AGTCATCCAG 50

&lt;210&gt; 97

&lt;211&gt; 58

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Coding chain for peptide of SEQ ID:26

&lt;400&gt; 97

GATCCCATCA TCCTATGTAT TCTATGACTA GGGCGTTGCC TGGTGGAGGT TCGGAGCT 58

&lt;210&gt; 98

&lt;211&gt; 50

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Complimentary chain for ssDNA of SEQ ID:26

&lt;400&gt; 98

CCGAACCTCC ACCAGGCAAC GCCCTAGTCA TAGAATACAT AGGATGATGG 50

&lt;210&gt; 99

&lt;211&gt; 58

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Coding chain for peptide of SEQ ID:27

&lt;400&gt; 99

GATCCGGTAG TGCTCATTCT CGGAATGATG CTGCTCCTGT GGGTGGAGGT TCGGAGCT 58

&lt;210&gt; 100

&lt;211&gt; 50

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Complimentary chain for ssDNA of SEQ ID:27

&lt;400&gt; 100

CCGAACCTCC ACCCAGGGA GCAGCATCAT TCCGAGAATG AGCACTACCG 50

&lt;210&gt; 101

&lt;211&gt; 58

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Coding chain for peptide of SEQ ID:28

&lt;400&gt; 101

GATCCCATTC GCCTTTGATG CAGTATCATA TGTCGGGTAC GGGTGGAGGT TCGGAGCT 58

&lt;210&gt; 102

&lt;211&gt; 50

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Complimentary chain for ssDNA of SEQ ID:28

&lt;400&gt; 102

CCGAACCTCC ACCCGTACCC GACATATGAT ACTGCATCAA AGGCGAATGG 50

&lt;210&gt; 103

&lt;211&gt; 58

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Coding chain for peptide of SEQ ID:29

&lt;400&gt; 103

GATCCTATGC GCATATGACG ATGCCGTCTC GGTTTTGGC GGGTGGAGGT TCGGAGCT 58

&lt;210&gt; 104

&lt;211&gt; 50

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Complimentary chain for ssDNA of SEQ ID:29

&lt;400&gt; 104

CCGAACCTCC ACCCGGCAAA AACCGAGACG GCATCGTCAT ATGCGCATAG 50

&lt;210&gt; 105

&lt;211&gt; 52

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Coding chain for peptide of SEQ ID:30

&lt;400&gt; 105

GATCCGCTTG TCCGCCTACG CAGTCTCGGT ATTGCGGTGG AGGTTCCGAG CT 52

&lt;210&gt; 106

&lt;211&gt; 44

&lt;212&gt; DNA

<213> Artificial Sequence

<220>

<223> Complimentary chain for ssDNA of SEQ ID:30

<400> 106

CCGAACCTCC ACCGCAATAC CGAGACTGCG TAGGCGGACA AGCG 44

<210> 107

<211> 52

<212> DNA

<213> Artificial Sequence

<220>

<223> Coding chain for peptide of SEQ ID:31

<400> 107

GATCCGCTTG TAATGGCATG TTGGCCTTTC AGTGGGTGG AGGTCGGAG CT 52

<210> 108

<211> 44

<212> DNA

<213> Artificial Sequence

<220>

<223> Complimentary chain for ssDNA of SEQ ID:31

<400> 108

CCGAACCTCC ACCGCACTGA AAGGCCAACA TGCCATTACA AGCG 44

<210> 109

<211> 52

<212> DNA

<213> Artificial Sequence

<220>

<223> Coding chain for peptide of SEQ ID:32

<400> 109

GATCCGCTTG TACGCCGAAG CCGGGCAAGC ATTGGGTGG AGGTCGGAG CT 52

<210> 110

<211> 44

<212> DNA

<213> Artificial Sequence

<220>

<223> Complimentary chain for ssDNA of SEQ ID:32

<400> 110

CCGAACCTCC ACCGCAATGC TTGCCCGGCT TCGGCGTACA AGCG 44

<210> 111

<211> 972

<212> DNA

<213> Artificial Sequence

<220>

<223> HPR coding artificial sense-sequence

<400> 111

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gagctaagat cagaccctcg tattgccgag agcatccttc gtcttcacit ccacgactgc 180  
tttgtaaag gttgtgacgc atcgatcttg ttagacaaca caacatcatt tcgaacagag 240  
aaagatgcgt ttggaaacgc aaactcggca agaggatttc cagtattga tagaatgaaa 300  
gccgcggtgg agagtgcatt cccaagaacc gtttcattgc cagatttgct caccattgca 360  
gtcaacaat ctgtcacttt ggcgggaggt ccttcttgga gagttccttt gggcagaaga 420  
gatagcttac aagcatttct ggatcttgct aatgcaaac ttccagctcc attcttcaca 480  
cttccacaac ttaaagacag ctttagaaat gttggcctca accgttcttc tgatctcggt 540  
gcactgtccg ggggccacac atttggtaaa aatcagtgct gggttattat ggacagatta 600  
tacaacttca gcaacaccgg ttaccgat cctacttca acactactta tctccaaact 660  
cttcgtggac tatgtccct caatggtaat ctaagcgctt tggaggattt tgatctacgt 720  
acgccaacga ttttgacaa caaatactat gtgaatctcg aagaggaaaa aggacttacc 780  
caaagcgacc aagagttgtt ctctagcccc aatgccactg acacaatccc ttgggtgaga 840  
tcatttgcta atagcacaca aacattcttc aatgcatttg tggaggcgat ggataggatg 900  
ggaaacatta cactcttac aggaactcaa ggacagatca ggttgaattg tagggtggtg 960  
aactccaact ct 972

<210> 112

<211> 120

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 112

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<210> 113  
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<210> 114  
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<212> DNA  
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<223> Primer for PCR multiplication

<400> 114  
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<210> 115  
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<223> Primer for PCR multiplication

<400> 115  
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<210> 116  
<211> 120  
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<223> Primer for PCR multiplication

<400> 116  
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<400> 117

atcgatcttg ttagacaaca caacatcatt 30

<210> 118

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<212> DNA

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<223> Primer for PCR multiplication

<400> 118

tcttctgccc aaaggaactc tccaagaagg acctcccgcc aaagtgcagc attgttgagc 60

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<210> 119

<211> 30

<212> DNA

<213> Artificial Sequence

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<223> Primer for PCR multiplication

<400> 119

tcttctgccc aaaggaactc tccaagaagg 30

<210> 120

<211> 120

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 120

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ttccagctcc attcttcaca cttccacaac ttaaagacag ctttagaaat gttggcctca 120

<210> 121

<211> 30

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<223> Primer for PCR multiplication

<400> 121

gagttccttt gggcagaaga gatagcttac 30

<210> 122



<211> 120  
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<220>  
<223> Primer for PCR multiplication

<400> 122  
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<210> 123  
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<220>  
<223> Primer for PCR multiplication

<400> 123  
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<210> 124  
<211> 120  
<212> DNA  
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<220>  
<223> Primer for PCR multiplication

<400> 124  
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<210> 125  
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<212> DNA  
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<220>  
<223> Primer for PCR multiplication

<400> 125  
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<210> 126  
<211> 120  
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<220>  
<223> Primer for PCR multiplication

<400> 126

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cgagattcac atagtatttg ttgtcaaaaa tcgttggcgt acgtagatca aaatccacca 120

<210> 127

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 127

cagtggcatt ggggctagag aacaactctt 30

<210> 128

<211> 120

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 128

ctctagcccc aatgccactg acacaatccc ttgggtgaga tcatttgcta atagcacaca 60

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<210> 129

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 129

ctctagcccc aatgccactg acacaatccc 30

<210> 130

<211> 72

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 130

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tgtaatgttt cc 72

<210> 131  
<211> 34  
<212> DNA  
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<220>  
<223> Primer for PCR multiplication

<400> 131  
agagttggag ttcaccaccc tacaattcaa 30

<210> 132  
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<212> DNA  
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<220>  
<223> Primer for PCR multiplication

<400> 132  
agtccgatcc gtttatgcga atcagactcc gccttctaag gcgcggggtg gaggttcg 58

<210> 133  
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<212> DNA  
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<220>  
<223> Primer for PCR multiplication

<400> 133  
aggcctcgag agagttggag ttcaccaccc taca 34

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<220>  
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<400> 134  
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gatgcagtga aagttaccct cggtcacaaa ggccgtaacg tagttctgga taaatctttc 180  
ggatgcaccga ccatcaccaa agatgggtgtt tccgttgctc gtgaaatcga actggaagac 240  
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aaagctgttg ctgcgggcat gaacccgatg gaccigaaac gtggatcga caaagcggtt 420  
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gctcaggttg gtaccatctc cgctaactcc gacgaaaccg taggtaaact gatcgctgaa 540  
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<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

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gacgtaaaat tcggtaacga cgctcgtgtg aaaatgctgc gcggcgtaaa cgtactggca 120

<210> 136

<211> 30

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<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 136

gtttatgcga atcagactcc gccttctaag 30

<210> 137

<211> 120

<212> DNA

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<220>

<223> Primer for PCR multiplication

<400> 137

gagcaacgga aacaccatct ttggtgatgg tcggtgcacc gaaagattta tccagaacta 60

cgttacggcc ttttggaccg agggtaactt tcactgcatac tgccagtacg tttacgccgc 120

<210> 138

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 138

gagcaacgga aacaccatct ttggtgatgg 30

<210> 139

<211> 120

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 139

agatgggtgt tccgttgctc gtgaaatcga actggaagac aagttcgaaa atatgggtgc 60

gcagatgggtg aaagaagttg cctctaaagc aaacgacgct gcaggcgacg gtaccaccac 120

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<400> 140  
agatggtggt tccgttgctc gtgaaatcga 30

<210> 141  
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<210> 142  
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<212> DNA  
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<220>  
<223> Primer for PCR multiplication

<400> 142  
aaccgctttg tcgataccac gtttcaggtc 30

<210> 143  
<211> 120  
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<220>  
<223> Primer for PCR multiplication

<400> 143  
gtggtatcga caaagcgggt accgctgcag ttgaagaact gaaagcgtg tccgtaccat 60  
gctctgactc taaagcgatt gctcagggtg gtaccatctc cgctaactcc gacgaaaccg 120

<210> 144  
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<220>  
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<400> 144

gtggtatcga caaagcgggtt accgctgcag 30

<210> 145

<211> 120

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 145

tcaaccacgt ccagttcgtc ctgcagaccg gtaccgtcct caacggatgat aacgccttct 60

ttaccgactt tgtccatcgc ttcagcgatc agtttaccta cggtttcgtc ggagttagcg 120

<210> 146

<211> 30

<212> DNA

<213> Artificial Sequence

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tcaaccacgt ccagttcgtc ctgcagaccg 30

<210> 147

<211> 120

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 147

gacgaactgg acgtggttga aggtatgcag ttcgaccgtg gctacctgtc tccttacttc 60

atcaacaagc cggaaactgg cgcagtagaa ctggaaagcc cgttcacccct gctggctgac 120

<210> 148

<211> 30

<212> DNA

<213> Artificial Sequence

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<400> 148

gacgaactgg acgtggttga aggtatgcag 30

<210> 149

<211> 120

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 149

cttcgccttc tacatcttca gcgatgataa gcagcgggtt gcctgctttg gcaacagctt 60

ccagaaccgg cagcatttcg cggatgttgg agattttctt gicagccagc aggatgaacg 120

<210> 150

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

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<400> 150

cttcgccttc tacatcttca gcgatgataa 30

<210> 151

<211> 120

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 151

tgaagatgta gaaggcgaag cgctggcaac tgctgttgtt aacaccattc gtggcatcgt 60

gaaagtcgct gcggitaaag caccgggcct cggcgatcgt cgtaaagcta tgctgcagga 120

<210> 152

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 152

tgaagatgta gaaggcgaag cgctggcaac 30

<210> 153

<211> 120

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication



<400> 153

cacaacacgt ttagcctgac ccaggctctc cagggttgct tttccagct ccataccgat 60

ctcttcagag atcacggtac cgccagtcag gggtgcgata tctgcagca tagctttacg 120

<210> 154

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 154

cacaacacgt ttagcctgac ccaggctctc 30

<210> 155

<211> 120

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 155

gtcaggctaa acgtgtgtg atcaacaaag acaccaccac tatcatcgat ggcgtgggtg 60

aagaagctgc aatccagggc cgtgttgctc agatccgtca gcagattgaa gaagcaactt 120

<210> 156

<211> 30

<212> DNA

<213> Artificial Sequence

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<400> 156

gtcaggctaa acgtgtgtg atcaacaaag 30

<210> 157

<211> 120

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 157

tctttcattt caacttcggt agcagcacc accittgataa ctgcaacgcc gcctgccagt 60

ttcgctacgc gttcctgcag ttttcacgg tcgtagtcag aagttgcttc ttcaatctgc 120

<210> 158

<211> 30  
<212> DNA  
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<220>  
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<400> 158  
tctttcattt caacttcggt agcagcaccc 30

<210> 159  
<211> 120  
<212> DNA  
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<220>  
<223> Primer for PCR multiplication

<400> 159  
accgaagttg aaatgaaaga gaaaaaagca cgcgttgaag atgccctgca cgcgaccgt 60  
gctgcggtag aagaaggcgt ggttgctggt ggtggtgttg cgctgatccg cgtagcgtct 120

<210> 160  
<211> 30  
<212> DNA  
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<220>  
<223> Primer for PCR multiplication

<400> 160  
accgaagttg aaatgaaaga gaaaaaagca 30

<210> 161  
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<212> DNA  
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<220>  
<223> Primer for PCR multiplication

<400> 161  
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cgttctggtc ttcgttctga ccacgcaggt cagccagttt agacgtacg cggtacagcg 120

<210> 162  
<211> 30  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Primer for PCR multiplication

<400> 162

agttcaatac gatctgacgc agcggagctt 30

<210> 163

<211> 120

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 163

gcgtcagatc gtattgaact gcggcgaaga accgtctgtt gttgctaaca ccgttaaagg 60

cggcgacggc aactacggtt acaacgcagc aaccgaagaa tacggcaaca tgatcgacat 120

<210> 164

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 164

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<210> 165

<211> 120

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<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 165

caggtcggta accatgcatt cggtggatgat catcaggcca gccacagaag ctgcgtactg 60

cagagcagaa cgagttactt tggttgggtc caggataccc atgtcgatca tgttgccgta 120

<210> 166

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 166

caggtcggta accatgcatt cggtggatgat 30

<210> 167

<211> 95

<212> DNA

<213> Artificial Sequence

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<223> Primer for PCR multiplication

<400> 167

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tgcatcgttt ttgggcaggt cggtaaccaat gcatt 95

<210> 168

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Primer for PCR multiplication

<400> 168

aggcctcgag ttacatcatg ccgcccattgc 30

<210> 169

<211> 33

<212> DNA

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<223> Primer for PCR multiplication

<400> 169

ttacatcatg ccgcccattgc cacccatgcc gcc 33

<210> 170

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> anodisk membrane-binding peptide

<400> 170

Tyr Ala Gln Thr Pro Pro Ser Arg

1

5

<210> 171

<211> 12

<212> PRT

<213> Artificial Sequence

<220>

<223> anodisk membrane-binding peptide

<400> 171

Leu Tyr Ala Gln Gln Thr Pro Pro Ser Arg Ser Arg  
1 5 10

<210> 172  
<211> 16  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> anodisk membrane-binding peptide

<400> 172  
Val Tyr Ala Asn Gln Thr Pro Pro Ser Arg Ala Arg Ala Lys Ala Arg  
1 5 10 15

<210> 173  
<211> 20  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> anodisk membrane-binding peptide

<400> 173  
Val Tyr Ala Asn Gln Thr Pro Pro Ser Lys Ala Arg Tyr Ala Gln  
1 5 10 15  
Thr Pro Pro Ser Arg  
20

<210> 174  
<211> 46  
<212> DNA  
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<220>  
<223> Coding chain for peptide of SEQ ID:170

<400> 174  
GATCCTATGC GCAGACTCCG CCTTCTCGGG GTGGAGGTTC GGAGCT 46

<210> 175  
<211> 38  
<212> DNA  
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<220>  
<223> Complimentary chain for ssDNA of SEQ ID:170

<400> 175  
CCGAACCTCC ACCCCGAGAA GGCGGAGTCT GCGCATAG 38

<210> 176  
<211> 58  
<212> DNA

<213> Artificial Sequence

<220>

<223> Coding chain for peptide of SEQ ID:171

<400> 176

GATCCCTCTA TGCACAACAG ACTCCGCCTT CTCGGTCTCG GGGTGGAGGT TCGGAGCT 58

<210> 177

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Complimentary chain for ssDNA of SEQ ID:171

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CCGAACCTCC ACCCCGAGAC CGAGAAGGCG GAGTCTGTTG CGCATAAGAG 50

<210> 178

<211> 70

<212> DNA

<213> Artificial Sequence

<220>

<223> Coding chain for peptide of SEQ ID:1

<400> 178

GATCCGTTTA TCGAATCAG ACTCCGCCTT CTCGCGCAGC CGCAAAGGCG CGGGGTGGAG 60  
GTTCCGAGCT 70

<210> 179

<211> 62

<212> DNA

<213> Artificial Sequence

<220>

<223> Complimentary chain for ssDNA of SEQ ID:1

<400> 179

CCGAACCTCC ACCCCGCGCC TTTGCGCGTG CGCGAGAAGG CGGAGTCTGA TTCGCATAAA 60  
CG 62

<210> 180

<211> 82

<212> DNA

<213> Artificial Sequence

<220>

<223> Coding chain for peptide of SEQ ID:1

<400> 180

GATCCGTTTA TCGAATCAG ACTCCGCCTT CTAAGGCGCG GTATGCGCAG ACTCCGCCTT 60  
CTCGGGGTGG AGGTTCCGAG CT 82

<210> 181

<211> 74

<212> DNA

<213> Artificial Sequence

<220>

<223> Complimentary chain for ssDNA of SEQ ID:1

<400> 181

CCGAACCTCC ACCCGAGAA GCGGAGTCT GCGCATACCG CGCCTTAGAA GCGGAGTCT 60  
GATTCGCATA AACG 74